ARIZONA GAME AND FISH DEPARTMENT HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract Element Code: PDAST95090

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Tetradymia stenolepis* Greene

COMMON NAME: Mohave horsebrush, Mojave cottonthorn, Mojave horsebrush, Owens Valley

cotton thorn, Narrow-scaled Felt-thorn.

SYNONYMS:

FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: Greene, Bull. Calif. Acad. Sci. 1(3): 92. 1885.

TYPE LOCALITY: Tehachapi (Tehachepe), Kern Co., California, United States of America.

TYPE SPECIMEN: Holotype: CAS-1167. M.K. Curran s.n., 1884. Isotype: GH, NY(#273795, M.K. Curran, 1884 (This is a type fragment; origin (herbarium) of material is not noted on this sheet)).

TAXONOMIC UNIQUENESS: Species *stenolepis* is 1 of 10 species in the genus *Tetradymia* in North America, and 1 of 4 in Arizona. The other species of *Tetradymia* found in Arizona include *T. argyraea*, *T. axillaries*, and *T. canescens*.

DESCRIPTION: Spinescent shrub up to 120 cm (47.24 in) high. Munz (1974) reports shrub height at 40-80 cm (15.74-31.5 in). This much-branched shrub, is covered with a close-appressed, white wool (Jaeger, 1969). Young stems are unevenly tomentose, becoming glabrous in stripes below the spines. Primary leaves forming coarse, straight, weakly ascending spines, 2-3 cm (0.78-1.18 in) long, tomentose to sericeous; clustered leaves 10-30 mm, oblanceolate, tomentose or silvery-hairy. Heads borne in compact, corymbose clusters of 4-7 at the ends of branches; 0 bracts. Peduncles ebracteate, tomentose, 5-12 mm long; involucres 8-10, narrowly turbinate; phyllaries (4-)5, narrowly ovate, navicular, 8-10 mm long, tomentose. Florets (4-)5 per head; corollas slender, pale yellow (canary-yellow in Jaeger, 1969), tube 5-7 mm long, throat slightly dilated, about 2 mm long, lobes linear, acute, about 3.5 mm long. Anthers slender, about 3 mm long, barely sagittate, apices lanceolate; style branches about 3 mm long, ending in a short, papillate cone. Achenes weakly fusiform, 5-8 mm long, sparsely villous; pappus about 100-150 white or tawny, equal, penicillate bristles 9-12 mm long in 2-3 series. (Strother, 1978, and Hickman, 1993).

AIDS TO IDENTIFICATION:

ILLUSTRATIONS: Color photo (http://www.clunet.edu/wf/des/flowers/fwr-40.htm, 2002)

Line drawing (Hickman, 1993: p. 357)

Line drawing (Jaeger, 1969: pl. 737, p. 304)

Color photo of Isotype fragment (NY-273795, NYBG in

http://207.156.243.8/emu/vh/specimen.php?irn=432533)

Color photos (Michelle Cloud-Hughes 2004, in CalPhotos,

http://elib.cs.berkeley.edu/cgi/img_query)

Color photos (Heath McAllister 2004, in CalPhotos,

http://elib.cs.berkeley.edu/cgi/img_query)

Color photos (James M. Andre 2005, in CalPhotos,

http://elib.cs.berkeley.edu/cgi/img_query)

Color photo (in

http://www.calflora.net/bloomingplants/mojavecottonthorn.html)

Color photos (in http://ww1.clunet.edu/wf/des/scientific/des-39.htm)

TOTAL RANGE: Confined to western North America in Arizona, California, and Nevada.

RANGE WITHIN ARIZONA: NW of Cerbat Mountains, and Black Mountains, Mohave

County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial dicot shrub/subshrub.

PHENOLOGY: Flowers late May to August.

BIOLOGY:

HABITAT: Desert scrub on mesas and slopes.

ELEVATION: In Arizona, the elevation ranges from 3,300 – 4,000 ft (1007-1220 m). For its

range, *T. stenolepis* is found between 1,969 and 4,921 ft (601-1501 m).

EXPOSURE:

SUBSTRATE: In Nevada, found in granite soils or broken granite to sand.

PLANT COMMUNITY: Mojave Desert, in creosotebush scrub and Joshua-tree woodland. In Arizona, associated with *Coleogyne ramosissima* (blackbush), *Larrea tridentata* (creosotebush), and *Yucca schidigera* (Mojave yucca). (SEINET, accessed 2005). In Nevada, associated with *Acamptopappus* (goldenhead), *Krameria* (ratany), *Larrea*, and *Yucca*. In California, associated with *Amsonia* (slimpod), *Atriplex canescens* (four-wing saltbush), *Ephedra* (Mormon-tea), *Gutierrezia* (snakeweed), *Yucca brevifolia* (Joshua tree), and *Y. schidigera*.

POPULATION HISTORY AND TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None **STATE STATUS:** None

OTHER STATUS: None (USDI, BLM AZ 2005)

[Bureau of Land Management Sensitive (USDI,

BLM 2000)]

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BLM – Kingman Field Office; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

Benson, L. and R.A. Darrow. 1944. A Manual of southwestern desert trees and shrubs. University of Arizona Bulletin, Biological Science Bulletin No. 6, Vol. XV, No. 2. Published by University of Arizona Press. Tucson, Arizona, 1945. p. 345.

California Academy. CAS Botany Type Catalog. Accessed 8/24/2005.

http://www.calacademy.org/research/botany/types/FieldedSrch.asp.

CalFlora: Information on California plants for education, research and conservation. [web application]. 2002. Berkeley, California: The CalFlora Database [a non-profit organization]. Available: http://www.calflora.org/. (Accessed: May 08, 2002).

Harvard University Herbaria. 2001. Index of Botanical Specimens.

http://brimsa.huh.harvard.edu/cms-wb/specimens.jsp. Accessed: 8/24/2005.

Hickman, J.C., ed. 1993. The Jepson Manual: Higher Plants of California. University of California Press. Berkeley, California. pp. 352, 357.

Http://www.calflora.net/bloomingplants/mojavecottonthorn.html.

Integrated Taxonomic Information System (ITIS). Retrieved 8/24/2005 from ITIS, http://www.itis.usda.gov.

Jaeger, E.C. 1969. Desert Wild Flowers. Revised Edition. Stanford University Press. Stanford, California. Pp. 304, 306.

Missouri Botanical Garden Nomenclatural Data Base. *Tetradymia stenolepis* Greene. http://mobot.mobot.org/cgi-bin/search_vast. (Accessed: 08 May 2002).

- Missouri Botanical Garden TROPICOS, Nomenclatural Data Base. *Tetradymia stenolepis* Greene. http://mobot.mobot.org/cgi-bin/search_vast. Accessed: 24 Aug 2005.
- Munz, P.A. 1974. A Flora of Southern California. University of California Press. Berkeley, California. p. 236.
- NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.5. NatureServe, Arlington, Virginia. Available: http://www.natureserve.org/explorer. (Accessed: August 24, 2005).
- SEINet. Collections Search Result. Accessed 8/24/2005 at http://seinet.asu.edu/collections/list.jsp.
- Strother, J.L. 1978. *Cacaliopsis, Luina, Rainiera, Tetradymia, Peucephyllum, Lepidospartum*. North American Flora, Series II, Part 10, pages 160 to 173. The New York Botanical Garden, Bronx, New York.
- The New York Botanical Garden. NYBG Specimens Search Results. http://207.156.243.8/emu/vh/specimen_list.php. (Accessed: 8/24/2005).
- USDA, NRCS. 2004. The PLANTS Database, Version 3.5 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.
- USDI, Bureau of Land Management. 2000. Arizona BLM Sensitive Species List. Information Memorandum No. AZ-2000-018.
- USDI, Bureau of Land Management. 2005. Arizona BLM Sensitive Species List.
- Wildflowers of Southern California. A photographic gallery, *Tetradymia stenolepis*: 40. http://www.clunet.edu/wf/des/flowers/fwr-40.htm. (Accessed: 08 May 2002).

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

Genus *Tetradymia* from the Greek **tetra**, "four," and **dymos**, "together," from the four-flowered heads of the first known species of this genus. Species *stenolepis* refers to narrow-scaled.

Revised: 2002-05-16 (SMS) 2005-08-25 (SMS)

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